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THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

The Clouds of Adversity Departing.

The present Spring, if it deserves that name, has been one of severe trial for the bee-keeper. Winter, as an unwelcome guest, lingered in the lap of Spring so long that his presence became irksome and disgusting. We have the following wail from Mr. Heddon:

Still Snowing.

Byron said, "The moon is up, and yet it isn't night." We can say, "It snows yet, but still it is not winter." Bees were never so weak and poor in stores at this date in my apiary. I have lost 125 out of 350, and the loss will amount to 150, ere warm weather arrives. As the law of supply and demand governing prices has not yet entirely deserted apiculture, every dead colony enhances the value of all the living. All bloom is 2 weeks behind time.

JAMES HEDDON.

Dowagiac, Mich., May 22, 1883.

And Mr. Doolittle wrapped himself in his overcoat and sighed:

Cold, Cold, Cold.

We have not had 5 days so far this year, warm enough to open the bee hives without danger of chilling the brood, of which there is but little. It freezes nearly every night. On the morning of the 14th, ice was found $\frac{1}{4}$ inch thick. Bees are getting poor in numbers and short of stores.

G. M. DOOLITTLE.

Borodino, N. Y., May 17, 1883.

While Mr. Demaree records the fact of having

A Cold Wave in Kentucky.

Notwithstanding the weather here has been very changeable, the season so far has not been altogether unfavorable. My bees have built up rapidly, and have done well on fruit bloom, dandelion, etc. Locust opened on the 13th inst., and gave a deluge of nectar till cut short off by the cold

wave of the 21st. We had a skiff of snow (a sight never before witnessed here at this season of the year), on the night of the 21st. The bees were housed for 3 days. White clover is wasting. I have been feeding a swarm that issued just before the present cold, rainy, gloomy spell. The prospects look better to-day (23d). I notice that the three dismal, cold, rainy days just past, have afflicted some of my nursing nuclei with dysentery. The weather has been unfavorable to queen rearing—too changeable.

G. W. DEMAREE.

Christianburg, Ky., May 23, 1883.

And Mr. Frazer is not at all pleased with

A Snow Storm in Indiana.

We have had the worse snow storm ever known for this time of year, in Indiana. It commenced with a cold rain, and yesterday, about 10 o'clock, it turned to snow, and snowed until night; although it melted very fast, there was about 2 inches of snow on the roofs, boards, etc. It snowed more last night, and fruit trees are bent to the ground, and the timber is mourning under its heavy burden. I think there has fallen quite one foot of snow, since yesterday morning. Bees were doing extra well; their brood-chambers are full of brood and honey, and some were storing honey in the boxes. White clover is beginning to bloom, and is as plenty as I ever saw it, and everything looked favorable for a good harvest, but it looks dismal this morning.

A. FRAZER.

Bloomingsport, Ind., May 22, 1883.

Mr. G. W. Ashby grows despondent over his

Sad Case of Spring Dwindling.

I send the discouraging news of my sad disappointment in my bees. I doted upon my 66 colonies which I had in the fall of 1882. Now I have 56; they wintered well enough, but dwindled away in the spring, till my loss is ten; and nearly one-half of the others are to-day nothing more than nuclei. If I unite them, or wait until they build up, I shall get no honey this season, from a part of them. We are now in the locust, poplar and white clover bloom, etc. The bees all have a good quantity of brood. It has been a very bad spring here; it was too cold during peach and apple bloom. On May 15, we had almost a blizzard. We had to wrap up as in

winter. Now it is too windy and dry; the bees cannot stick to the locust blossoms; they are blown and tossed about in every direction, and many are lost in the pond. It is awful to see my pets have such a time. I fondly anticipated a glorious harvest, this season, of several thousand pounds of honey. I ordered a lot of bee supplies and foundation to aid them, but all my fond hopes are blasted. Not a swarm yet, and but few colonies look likely to make a surplus. I have one colony in the Cunningham hive, which seems to outstrip all the others. They are at work in four boxes of 5 pound weight; more than one-half built out, and partly filled with honey. The others are in the Langstroth hive. If you ever saw any one have the blues, I am the one. I have quit looking after my farming interest, and gone wild on the bee, that wonderful insect. I will have to give up, and keep one or two to study their mysterious ways. My whole thoughts were centered on the bee, but, alas, I must look after some other business for a livelihood. I got all kinds of seeds to sow for my bees; last year I had a fine lot of sweet clover. My bees went wild over it; this year there are only about 100 plants to the acre, all told. Alsike is in tolerable condition; Simpson honey plant, fine; Rocky Mountain bee plant, none; spider plant, none. My grief is past endurance.

G. W. ASHBY.

Valley Station, Ky., May 17, 1883.

Judge Andrews gives a cheerless account of

The Spring in Texas.

There never has been such a spring for bees in South Texas before; my bees have not swarmed as much up to this date as they did last year by the 27th of March. They have not increased 3 per cent. yet, and the prospect for more than 25 per cent. is poor; but I confess that we are sailing in "unknown waters."

W. H. ANDREWS.

McKinney, Texas, May 27, 1883.

And Dr. H. M. Williams reports discouragingly that it is

Still Cold in Georgia.

We are having the latest spring here I have known in 20 years. For the last three mornings the thermometer stood at 42°, and we have had considerable frost. Bees have done nothing in the way of storing honey in the upper story. My bees are

swarming some, and I am piving them on full combs, where my bees died in the winter. When I put a swarm in a hive full of empty combs, they go back and rob the old hive, so I have to move the old one. I expect they rob the old one because the honey flow is small. I have 60 colonies; some pure Italian, some hybrid, and I am satisfied my mixed bees, with the pure blacks and Italians are the best bees I have, for honey; though not so easy handled. I am always glad when the BEE JOURNAL comes; I could not do without it.

H. M. WILLIAMS, M. D.
Bowden, Ga., May 24, 1883.

These letters are anything but encouraging; truly, in the language of Thomas Paine, "These are the times that try men's souls." We do not wonder why some may become discouraged, as they view the untenanted hives and soiled combs which are left, as the sequel to their cherished hopes for the future. However, none should be too hasty in passing judgment. With the hives and combs already provided, more than one-half the original investment is saved, and with a propitious season for the present, our losses will be made good with a credit in our favor on the balance sheet. We cannot expect bee-keeping to be unvaryingly prosperous, any more than any other special branch of industry which is dependent upon natural causes, but we can, with forethought, industry and systematic perseverance, make it as reliable as any other.

Were it only the lesser bee-keepers, or the novices, who had suffered losses, it might, perhaps, be attributed to ignorance or negligence; but when we take into account the losses by specialists and scientific bee-keepers, we cannot but look upon such a charge as an insult to intelligence.

The fruit-grower expects frequent failures in his crops, and is thankful that his trees survive without injury; the farmer's wheat winter-kills, when he plows up the ground in the spring and plants anew in corn or something else, and replants if frost kills that; the stock-raiser who loses part of his flock, gives the remainder better attention, and patiently toils two or three years to repair his losses; the merchant has his seasons of loss, but with renewed push and activity makes up for the dull times when the "good time coming" has arrived; and the energetic bee-keeper, although many bright dreams may have vanished, will not despond, but without taking time to count the untenanted hives, begins immediately to estimate the

number he can refill, working with a will to retrieve his losses; and while keeping time with the musical hum of his bees, in the "Sweet by-and-by" will reap a more than commensurate recompense for his vexations and disappointments.

As we write this the air has again become warm, the sun shines out as cheerfully as it ever shone on a summer's day. The robin's cheerful piping, and the bluebird's merry song can be heard in the early morning, as the golden sunshine tips the hill-tops, and the hills and valleys are arrayed in gorgeous robes of emerald green.

The trees, plants and shrubs have commenced to bloom here in the North, and soon the heavy basswood will enrich the hives, making them to overflow with the rich nectar. Let all, therefore, take courage and prepare for a vigorous season's work—the sunshine already succeeds the storm, and chases the gloom away. Be cheerful and hopeful—there is no time to lose. Nature now awakens to life; the far-stretching fields clothed in emerald green, the lawns and lanes with their grassy carpets, the air laden with the sweet perfume of the blossoms in garden and orchard, the trees in forest and grove animated with the feathered songsters whose little lives seem an incarnation of happy melody—all these combine to help us forget the dreary hours of the past, and with keener zest enjoy the future.

"Into all lives gain must fall,
Over all lands the storm must beat,
But when the pain and the storm are o'er
The after-sunshine is twice as sweet.
Through every straight we have found a road,
In every grief we have found a song,
We have to bear, and have had to wait,
But think how well we have got along."

We have received from Mr. Wm. Sims, Secretary of the Kansas State Board of Agriculture, at Topeka, a pamphlet entitled "Kansas, its Resources and Capabilities," which is being printed in the English, German, Swedish, and Danish languages, for gratuitous distribution, and will be sent to any one upon application, or will be mailed to any address furnished, either in this country or Europe, the person sending address to indicate the language desired. It contains a map of the State, and several views of farms, cattle, ranches, etc., and is full of useful information concerning that State.

Mr. Alley's new book on Queen Rearing will hereafter cost \$1.25

Honey and Bee Show in Canada.

Mr. A. Robertson, of Carlisle, in the *Canadian Farmer* gives the following list of prizes offered in the Honey and Bee Department of the Hamilton Central Fair:

As the directors of Hamilton's Central Fair had a meeting on April 24, I am now able to present our prize list. I feel like giving three cheers to the directors, for the way they used us; they gave us nearly everything we asked for. Last year we were mixed up with the fruit, such as turnips and cabbages, and the prizes altogether amounted to about \$20. This year we are to have a class by ourselves, and they are offering prizes to the amount of \$70. They also allow us to appoint our judges, and we will endeavor to get practical bee men, who each use a different size frame and hive.

Prizes offered by the Central Fair Association:

| | 1st. | 2d. |
|---|-------------------|--------|
| For best Comb Honey, not less than 10 pounds..... | \$5.00 | \$3.00 |
| For Best Extracted, not less than 10 lbs. | 5.00 | 3.00 |
| For Best display of Comb Honey..... | 8.00 | 4.00 |
| For Best display of Extracted..... | 8.00 | 4.00 |
| For Best and largest display of both kinds..... | Medal and Diploma | |
| For Best Exhibition and management of Bees..... | 10.00 | 5.00 |
| For Best Hive for Comb Honey..... | 4.00 | 2.00 |
| For Best Hive for Extracted Honey..... | 4.00 | 2.00 |
| For Best Hive for all purposes..... | Medal and Diploma | |

The following are by our Bee Association and Specials:

Best display of Apianian Supplies.....\$10.00 \$5.00

Specials given by D. A. Jones, Beeton, Ont.:

| | |
|--|---------|
| Best display of Extracted Honey, put up in the most pleasing and marketable shape, best imported Holy Land Queen, valued at..... | \$15.00 |
| Best display of Comb Honey, in the best marketable shape, best imported Cyprian Queen, valued at..... | \$10.00 |

In both of the above classes, exhibitor must be producer.

Special by Green & Robertson, Carlisle, Ont.:

| | |
|--|--------|
| Best Bee Hive for all purposes, Chaff Hive complete, for Comb Honey, valued..... | \$5.00 |
| Root's Simplicity Hive complete, for Extracted Honey..... | 2.00 |

Special by J. M. Knowles, President of the Association:

| | |
|----------------------------|--------|
| Best Observatory Hive..... | \$5.00 |
|----------------------------|--------|

Special by *Canadian Farmer*:

| | |
|---|------|
| Best display of Wax, <i>Canadian Farmer</i> for one year..... | 1.00 |
| Best Honey Crate, <i>Canadian Farmer</i> for one year..... | 1.00 |

Ants are sometimes troublesome in an apiary. They can be destroyed by sprinkling salt around the hives and in the ant-hills.

Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred, for larger amounts.

How to Foretell the Weather.

A. J. DeVoe, of Hackensack, N. J., sends to the Farmers' Club of the American Institute, the following nine rules by which, it is said, a person in any part of the Northern Hemisphere (north of 15° of latitude) can form an accurate opinion of the wind and weather for a hundred miles around him:

1. When the temperature falls suddenly, there is a storm forming south of you.
2. When the temperature rises suddenly, there is a storm forming north of you.
3. Wind always blows from the region of fair weather toward a region where the storm is forming.
4. Cirrus clouds always move from a region where a storm is in progress toward a region of fair weather.
5. Cumulus clouds always move toward a region where a storm is raging.
6. When cirrus clouds are moving rapidly from the north or northwest, there will be a cold rain storm on the morrow; if it be winter, there will be a snow storm.
7. The wind blows in a circle around a storm, and when it blows from the north, the heaviest rain is east of you; from the south, the heaviest rain is west; from the east, the heaviest rain is south; from the west, the heaviest rain is north of you.
8. The wind never blows unless rain or snow is falling within 1,000 miles of you.
9. Whenever a heavy white frost occurs, a storm is forming within 1,000 miles north or northwest of you.

A few Seasonable Hints.

As there has, during this spring, been so much cool and wet weather, the bees are suffering for food. Mr. Oatman, who was in our office a few days since, says he is systematically feeding his bees every day in order to keep them strong in numbers, and ready for the honey harvest. Mrs. L. Harrison, in the *Prairie Farmer*, remarks as follows:

Those who are desirous of increasing their colonies, should feed liberally, whenever the honey flow fails, either by reason of cool or rainy weather, so that brood-rearing will not be retarded. Large quantities of stores are consumed in brood-rearing, as a bee eats more in a larvæ state, than during the remainder of its life. New swarms sometimes, perish during long continued rainy weather, by starvation. It is good management to feed during intervals of honey-gathering, as the queen lays, not according to the stores on hand, but in ratio to her income.

Some colonies have too much honey, so that the queen has not room enough to lay; when this is the case, it should be removed, and may be ex-

changed for empty comb, from a less provident stock, and both be benefited. Diluted honey, or syrup made of either brown or white sugar, can be fed almost any way, at this season of the year. Great care should be exercised, lest robbing is induced, by dropping the feed around the hives. The feed should be thin, and the vessels holding it should contain cut straw or little floats to prevent the bees drowning, or a piece of thin cloth can be spread over the surface. Where two story hives are used, the feed can be placed in the upper one, and a small aperture made to allow the bees to come up from below; or if a division-board is used, it can be placed back of it. Anyway that does not admit bees from the outside, or let the warmth from the cluster escape.

Bee-Keeping in Florida.

Mr. J. M. Lisenby, of Cedar Key, writes to the *Florida Journal* as follows concerning bee-keeping:

As the interest in Florida and its various resources are attracting considerable attention, I will try to give some facts in regard to bee-keeping—an industry that can be made successful in quite a large portion of the State. It is true that a great deal of the interior—especially the high pine lands—is not adapted to bee-culture, while the Atlantic coast, south of St. Augustine, and the Gulf coast, south of Cedar Key, certainly are rich honey-producing sections.

In the best bee pastures of the State the season for storing surplus honey only lasts about two months; but in this short time they will store from 100 to 150 pounds per hive, and the remainder of the year they will gather enough for their support.

At Cedar Key the bees commence breeding in January, and continue to breed until November. They usually commence to swarm in March, and continue until about the first of June, when the work of storing surplus honey begins.

The mangrove is the principal honey-producing plant, and the honey gathered from it cannot be excelled in appearance, even by the white clover honey of Vermont, and the superiority of the mangrove over other honey-producing plants, is that, growing as it does in the marshes, it is never affected by the floods or drouth.

The honey produced from the palmetto is also of good appearance and flavor, yet it is not so reliable as that from the mangrove.

I have never been in any country where I had as little trouble to manage bees as this. They are never troubled by worms or bee-moths, if they are kept in anything like good condition.

Mr. Joseph D. Enas, Napa, Cal., has issued a six-paged circular and price list for Queens and Supplies for the Pacific Coast.

Honey Production in Canada.

I enclose an item of bee news, clipped from the *Montreal Witness* of May 9, containing an inquiry and reply by D. A. Jones, of Beeton, Ont., who edits the bee department of that paper. I think Mr. Jones' reply does American honey producers an injustice. I have lived in Canada for 40 years, and my experience and observation have been the very reverse. What is your opinion?

Marlette, Mich.

WM. SHIER.

In answer to the inquiry, Mr. Jones makes the following very extravagant assertions:

I strongly I advise your remaining in Ontario. You will find that the people of Canada are better educated to the use of honey—and especially extracted honey, which is more profitable than comb. Packages for putting up honey are cheaper in Canada than the United States, and we seem to be far ahead of our neighbors in the style of putting them up. The labels which are being used by the United States' dealers now so extensively are made here in Canada, and the duty they pay is high. Above all these considerations there are localities in Canada which are superior to any in the United States. For large yields of honey the West is second to no country in the world, and our bee-keepers are at the present time more than equal in the race as regards supremacy for fine bee-keeping. Many of the new devices and improvements emanate from Canada's bee-keepers.

Many persons think their own bees, hives, utensils and locations are the best, and, perhaps, this individual and local pride dictated the reply of Mr. Jones. Of course no one on this side of the boundary will agree with him.

Honey for the Children.—The *Farmers' Review* thus comments approvingly on a late editorial in the *BEE JOURNAL*:

Editor Newman, of the *BEE JOURNAL*, wisely suggests that those parents who feed their children on candies and syrups, because they want something sweet, to the great injury of the children, would find their children growing healthy and happy too, if given good honey instead of candies that are so fearfully adulterated.

The number of the *Bulletin D' Apiculture pour la Suisse Romande*, for May, has a full-page illustration of Mr. Chas. Dadant, of Hamilton, Ill. It is a lithograph, and is quite natural.

The *American Apiculturist* is the title of a new monthly just started by S. M. Locke, at Salem, Mass. It contains 32 pages, and makes a very creditable appearance.



For the American Bee Journal.

Systematic Breeding, etc.

G. W. DEMAREE.

On page 236, present volume of the BEE JOURNAL, Mr. Heddon approaches the old subject, "Best bees, etc.," with apology and apparent trepidation; but still he approaches the subject and comes prophesying.

The subject is "unpleasant" just now, but there are "millions in it." "Three-fourths" of the bees sold hereafter will be hap-hazard-hybrids. I only take the liberty to put it in plain English. I mean nothing but good to the cause of apiculture. I write this article not because it is pleasant or "unpleasant" to me, but because I wish to raise the standard of systematic breeding rather than to trail it in the dirt, and rather because as a breeder, I do not seek to be released from responsibility as to the character of my queens and bees.

I protest against the present tendency—mercenary tendency—to lower the standard of bee-breeding below the standards adopted and approved by all breeders of domesticated animals. I can see no reason why bee-breeding should not be entitled to as much dignity as a business as other like occupations.

"Bees for business" may be suggestive to some people of the hasty-made dollar, but to me it sounds like a clap-net, cheap advertisement. Let us suppose that a prominent breeder of farm stock should breed his "breeding stock" for "business," ignoring pedigree and purity of blood. Could any one doubt the result of such a course? He would soon find himself "ignored" as a breeder, and justly too, because the very necessity of the case demands, that, in breeding stock, some distinguishing features must be adopted as a test of the purity of the stock, and as a guarantee of good faith on the part of the breeder. So important is this matter considered by the stock interest in Kentucky, that the Legislative department of the State have enacted statutory laws to punish fraudulent, and protect honest breeders.

A prominent stock breeder has suggested that the reason why the mule has been a perpetual success is, because he is a "mule," and, therefore, cannot be deteriorated by unlimited crossing by those who are ignorant of the laws of scientific breeding.

It has occurred to me that it would be better for the future good of apiculture if the hybrid bee (the word "hybrid" in bee lore means a cross between the Italian and German races) was, in fact, a mule, in which case they might justly and properly be called "bees for business." The first cross between the two races make good business workers, but they are utterly unfit for breeding stock.

I insist that every honorable breeder of bees should be able to give a description of his stock sufficiently comprehensive to enable any one to identify them, and distinguish them from other races and strains of bees.

The transparent attempts, of late, to render ridiculous the chief features by which the Italian or yellow race of bees is most easily identified, is the severest blow of all to scientific breeding. All who have cared to read my articles on the subject of the three-band test, are aware of what my views are concerning that matter, and I need not consume time and space to go over the grounds again; but I do say that there is no such a thing as Italian bees without the yellow bands, and those who sneer at "bands" and "stripes" simply sneer at the Italian bee. I have no controversy with those who prefer native or mixed bees to the Italian, but they should stand to their position.

Let us look for a moment at this matter of "bands" and "stripes." Most breeders are able to describe the stock sold by them so clearly that they can be identified as a distinct race or variety. Some insure their tested queens to produce workers that will show the three-bands, if filled with honey and placed in a window. Some insure them to show the bands while standing on the combs; others sell "golden" Italians. If these last know what a golden Italian is, the workers must show the beautiful golden plumage in addition to the bands. Pure Albinos must have the white or silver bands, which consist of plumage, in addition to the regular bands.

Other distinguishing features may be named. My favorite strain of bees may be described as slender in form, the second band conspicuously broad, while the corslet and posterior bands are rather narrow, but finely cut and distinct. As a general rule they have but little plumage on their bodies, and that little is of a light, but not of a golden hue, as is the case with the golden variety.

I would describe them generally as slender, orange-banded bees. If there are any bees in the country that can beat them as honey-gatherers, I have a reasonable number of dollars which I would like to exchange for a few colonies of them. It will be seen that the several strains of bees described above may be identified wherever seen by the description given.

Now, apply the test to the "business bees," about which we have heard so much of late. It will be admitted that Mr. Heddon is good authority on the subject, and if there is a man living who can give an intelligent description of the "business bee," Mr. H. is the man to do it. Well, I have been reading his articles on "Business get-there bees" in nearly all the bee papers for two years past, and the most that I can make of it is, they are "larger" than some "shorter" bees are, and "darker" than some "lighter" bees are, and may or may not have "stripes." The description is wonderfully accommo-

dating. No one, I presume, but Mr. Heddon, can identify them.
Christiansburg, Ky.

For the American Bee Journal.

Texas State Bee-Keepers' Convention

The fifth annual meeting of the State Bee-keepers' Association was held in the apiary of Judge W. H. Andrews, at McKinney, Texas, on April 17 and 18, 1883.

After the routine business was done, the president addressed the meeting upon the subject of "Conventions." The address, though well-timed and interesting, but we have thought best not to send for publication, as we fear we may overtax the space of our valuable JOURNAL.

Dr. W. K. Marshall, of Marshall, then read his admirable essay on the "Different races of bees." [As soon as I am furnished a copy I will forward for publication.—Sec.]

The question was asked, "Are Cyprians remarkable as workers?" to which Dr. Marshall replied: "They are swift on the wing, and as industrious as any bees he ever handled, and gave as good results."

In answer to a question as to the temper of the Cyprians, the Doctor said they are cross, very easily angered, and when aroused, would sting everything on the yard, from chicken to king; and would not "down," but they were not a ghost.

Judge Andrews said he could not speak from a satisfactory trial, having handled but 3 colonies, which were enough to do him "the rest of the way."

It was asked if it is true that their queens are so wonderfully prolific as they are said to be?

Dr. Marshall said they are great breeders, and that he had thought they had too much at certain seasons. Judge Andrews said that Dr. Dzierzon says they breed so late in the fall that in bad honey years they often come out rich in bees, but poor in honey.

It was asked of Dr. Marshall, what are dark Italians? He replied that he regarded them impure bees, whether home-bred or imported.

E. H. West, of Tarrant county, asked Judge Andrews if he thought Italian bees swarmed more than blacks? He replied that he could see no difference as to that.

Are Italians better honey gatherers than the blacks? Dr. Marshall said he could not say that they were, but that they possessed some valuable traits peculiar to their race. Judge Andrews said he did not know what those traits are, but that he claimed but two points for the Italian over the blacks and all others; those are beauty, most exquisite, and amiability; that he could manipulate two colonies of Italians to one of the other races; he says the queens of the other yellow races are not near so beautiful as those of the Italians.

Judge Andrews was asked if he thought that hybrids are more irascible than blacks, as taught in our leading books on bee-culture? And

he replied, that his bees became good-mannered in proportion to their Italian blood, and *vice versa*.

It was asked, "Can we, by the comingling of races and careful selection, reach the 'coming bee'?" Judge Andrews said he would try to give his "say" on that subject in his essay on the coming bee, that *aint coming*. Convention adjourned till 2 p. m.

FIRST DAY—AFTERNOON SESSION.

An essay of B. F. Carroll, of Dresden, Navarro county, was read by the secretary.

[I will send it as soon as transcript is obtained.—Sec.]

Judge Andrews was asked if he could approve Mr. Carroll on the bee moth? To which he replied that he could not; that the so-called bee moth, more properly the *comb worm*, is not an enemy to the bee; that no colony of bees was ever destroyed by the bee-moth larvæ; they never infest combs used by the bees; that abandoned combs only became a prey to those worms. He was then asked why the books taught this fallacy? To which he replied that our books do not all teach it; that they had been read through the "glasses" of a barbarian tradition; he then opened Quinby's *New Bee-Keeping*, page 228, and read as follows: "Let it be distinctly understood by all beginners that the moth is not the cause of the decline of a once healthy stock. It simply takes advantage of the weakness induced by other causes."

Dr. Howard said that the so-called bee moth subsisted wholly upon the comb as constructed by the bees; that foundation made from pure wax was not attacked; that comb constructed upon it was infested only for the sake of the additional natural comb. He said that Judge Andrews called his attention to this a year ago, in a remark that the moth larvæ could not subsist upon pure beeswax.

M. H. Davis, of Grayson county, asked if these worms could subsist upon bee-bread?

Judge Andrews said he thought not, but could not speak from a satisfactory trial.

Dr. Howard said, that they could not; that they must have comb.

J. H. Manlove, of Fannin county, asked, "How long do fertile workers live?" Dr. Marshall said, that he thought they partook of the nature and longevity of the queen; that in their development they, perhaps, obtained a portion of royal jelly, the food intended for the queen larvæ, which caused a greater development of the reproduction organs. Judge Andrews thought that laying workers live just as long as other worker-bees.

Is there more than one fertile worker in a hive at one time, was asked?

Dr. Marshall said, that the number of eggs were not more than would be laid by one queen, but the manner in which they were deposited indicated the work of a plurality of fertile workers.

Judge Andrews said, that he had seen six workers laying eggs in one comb, at the same time.

Can we know when a hive is infested with fertile workers without opening it, was asked?

Dr. Howard said, that the appearance of dwarfed drones was evidence. Judge Andrews said, that unfertilized laying queens would produce dwarfed drones the same as fertile workers would.

It was asked, "Is there any difference in the appearance of the eggs of a fertile workers and those of fertile queens?"

Dr. Howard said, there was no difference, except that the workers deposited a multitude of eggs in one cell, and that often without changing her position; and again, they are attached carelessly along the cell-walls from extremity to base.

What is the best method to get rid of fertile workers, was asked by Judge Goodner?

Dr. Marshall said, give the colony a fertile queen. Judge Andrews approved the Doctor's plan, but preferred to give small quantities of young worker brood, at short intervals, and a young queen will soon succeed the worker pests.

Horace Welch, of Marion county, asked how long worker-bees live? Judge Andrews said they live 75 days in this latitude, the average life.

Will it pay to plant here, for honey, asked by Dr. Marshall? This was considered, by the convention, an important subject, and deserved our best attention; but as the secretary announced that an essay upon this subject was soon to be read, the matter was dropped.

Then came the question, by E. P. Massey, of Waco, will bees do as well in dense shade as they will where the sun reaches them most of the day?

Judge Andrews said, that the question embodied the extremes, that in the sun would be preferable in the early part of the season, and shade during July, August and September; that he preferred the sun to shine upon the hive till 9 o'clock a. m. and after 4 o'clock p. m.

What one fact, if generally known, would advance the cause of bee-culture more than any other, not now so known, was asked by Judge Andrews?

Dr. Howard said, that one of the greatest stumbling stones was the common idea that "bees work for nothing and board themselves."

Dr. Marshall thought that if the masses could be taught that honey is purely a wholesome and health-giving diet, while the fine, extravagantly high-priced syrups of to-day are a chemical compound, contaminated with glucose, which is daily undermining the health of the people; that the demand for pure honey would so exceed the supply, that many more persons capable of cultivating bees, would be induced to fall into our ranks.

Judge Andrews thought that the greatest drawback to the growth of this great source of wealth, health and pleasure, is the fear of the *sting*; that if the people could be taught that by the judicious use of the "smoker" the cause for this palsy horror can

be banished forever, that thousands of the brightest sons and daughters of Adam, that are now out in the cold world, would be brought happily into our fold.

Mr. W. T. Pryor, of Farmersville, wished to know the proper time to transfer bees from box hives. Mr. W. R. Graham, of Greenville, answered, "Whenever you find them in box hives."

Dr. Howard said, "Bro. Graham, you handle that subject most admirably."

Dr. Marshall said that during fruit-bloom was the time usually chosen, and he thought there were many good reasons for it.

The president appointed W. K. Marshall, G. R. Cooper and T. C. Goodner committee on resolutions, and W. R. Howard, H. Pearce and E. M. Wise committee on apianian supplies and exhibits.

Adjourned till 9 o'clock, second day.

MORNING SESSION—SECOND DAY.

Dr. Marshall read an essay on "Extracted honey."

[Will send essay on when I get a transcript.—Sec.]

H. Welch asked, "When bees gather pollen are they likely gathering honey?"

Dr. Howard responded that many plants yield pollen when there is no honey to be gathered; not being secreted by the flowers, at such times the bees gather pollen alone.

H. Pearce asked, "Is a superabundance of pollen in a hive, in the spring, detrimental to bees?"

Judge Andrews replied, that there is no such thing as superabundance of pollen, in the South.

Judge Goodner asked, "Do any benefits accrue from natural swarming that cannot be secured by artificial swarming or dividing?"

Dr. Marshall said, that he had increased successfully by dividing, but that when the production of honey is the object, natural swarming is preferable; division is often attended with losses that ordinary foresight would not anticipate.

Judge Andrews said, that there were thrift and vigor attending natural swarming that could not be had in dividing; a new swarm does a land-office business; artificial swarms never get ready for our harvest, the horse-mint; they do not have just such a point in the North.

Mr. A. R. White, of Dallas county, inquired, "Can horse-mint be cultivated here with profit?"

Dr. Howard said, that it could be cultivated with the greatest ease, but, thought it would hardly pay in this country to do more than scatter the seed on waste land.

W. R. Graham gave some interesting experiments in planting horse-mint for honey.

Judge Goodner asked, whether settlement and cultivation of our prairies tend to decrease our honey resources?

The discussion here took a wide range with some difference of opinion, but the prevailing opinion was, that our volunteer resources are de-

creased by reducing our prairies to cultivation.

Convention adjourned till 2 o'clock p. m.

SECOND DAY—AFTERNOON SESSION

The secretary read an essay from Dr. J. P. H. Brown, of Augusta, Ga., on "Marketing honey."

Dr. Howard read his essay on "Honey plants in Northern Texas."

Judge Andrews read an essay on the "Bee-moth," which excited considerable attention and discussion, and also some feeling.

Dr. Howard read his essay on the "Queen bee—her nature and habits."

Judge Andrews, being called out, stated how, by accident, a few years ago, he made the discovery which led to the fact mentioned in Dr. Howard's essay that, "The queen must become tranquilized with the bees instead of the bees with the queen," and that the workers will receive a dozen queens as readily as one; in other words, if we cage a number of queens in one colony at the same time, we may liberate any one of them as though she were the only one there, the reigning queen being present up to the time of the liberation.

The election of officers for the next year resulted in the election of W. H. Andrews, of McKinney, President; W. K. Marshall, of Marshall, Vice-President; W. R. Howard, of Kingston, Secretary; E. M. Wise, of Waxahachie, Treasurer.

W. H. Andrews was elected to represent the Texas association in the convention of the North American Bee-Keepers' Society at Toronto, Canada, next October.

The committee on exhibits reported a large number of all kinds of beekeepers' supplies, honey and bees.

Resolutions were passed, thanking Dr. J. P. H. Brown, of Georgia, and Mr. B. F. Carroll, of Dresden, Texas, for their essays; and to Judge Andrews and the citizens of McKinney, for hospitality, etc.

After which the convention adjourned to meet in McKinney, Collin county, on Thursday, April 24, 1884.

W. R. HOWARD, Sec.

For the American Bee Journal.

The Standard Langstroth Frame.

G. M. ALVES.

Mr. Heddon admits (page 224), that the majority of hive makers, and (page 272), that the largest of them make the Langstroth frame $17\frac{3}{4}$ inches long, but at the same time denies (page 272), that the majority of Langstroth frames in use is of that length. Now in view of these facts, we must conclude that Mr. Heddon is driven to the position, that bee-keepers make their own hives and frames, and that those made by our manufactories do not represent those used by our beekeepers. Is such a position tenable?

Mr. Heddon in substance makes this declaration—that even though the large majority of bee-keepers use a frame $17\frac{3}{4}$ inches and call it the standard Langstroth, that though the

largest manufactories and the greatest number of them make that size and call it the standard Langstroth—that though our best authorities, the editors of our bee periodicals, and even Mr. Langstroth himself, declare this size to be the standard Langstroth—that though all of these be facts, still they have no weight in deciding the question.

Certainly, if there are any meanings to words, they must be those attached to them by the sovereignty of popular and authoritative usage.

Mr. Heddon objects to the fact of a frame $17\frac{3}{4}$ inches in length, taking eight standard one-pound sections, being used as an argument for that length as the standard.

He surely should not object to this length because it will do so, as by reason of this fact, it will suit a large number who prefer to take their honey in broad frames—a fact which was doubtless the chief reason for the change to $17\frac{3}{4}$ inches as the standard.

Mr. Heddon says Mr. Langstroth wrote a book in which he gave $17\frac{3}{4}$, and until he writes another and gives $17\frac{3}{4}$, he will insist on the former. Yet he admits Mr. Langstroth has since given his preference for the latter in a prominent periodical. Does Mr. Heddon hold that it is necessary to write a book in order to maintain or establish a preference?

By reference to Mr. Langstroth's work (page 331 of last edition), it will be seen that he "prefers" a given size hive, and adds: "Mr. Quinby prefers to make my frames longer and deeper." It will thus be seen in his book that he was not particular as to the precise and exact shape, but in general, undoubtedly thought best of frames or hives that approximated his; and hence when a frame was afterwards submitted to him $\frac{1}{4}$ of an inch longer, and which would afford advantages not given by his, he cheerfully and unhesitatingly gave it his preference.

If Mr. Heddon will call his frame the old Langstroth, or the twenty-years-ago Langstroth, or the obsolete Langstroth, we will acquiesce, but we cannot submit to its being called the present Langstroth, or the standard Langstroth.

We maintain that the standard Langstroth is $\frac{1}{4}$ inch longer. That it is so taken and accepted by Mr. Langstroth; by the editors of the prominent bee papers; by the large majority of bee-keepers, and by the largest manufactories, and the greatest number of them. We also maintain that the addition of the $\frac{1}{4}$ of an inch is a decided advantage, as it subserves an important use that the obsolete frame does not.

I am unable to see that I can make our case any stronger than I have done in this and my previous article, and submit the subject to the candid and informed readers of the BEE JOURNAL. In dropping the subject, I wish to say to Mr. Heddon, that I am always interested in and instructed by his articles, and regret to find him "off" on so important a subject as the "Standard Langstroth Frame."

Henderson, Ky., May 31, 1883.

For the American Bee Journal.

The Weather in Illinois.

S. A. SHUCK.

Mr. Doolittle says (May 17), "It freezes nearly every night," and Mr. Heddon says (May 22), "It snows yet, but still it is not winter."

Although we are situated much south of Messrs. Heddon and Doolittle, we have but little if any better weather than they have. On the morning of the 22d, we had a very heavy frost, and considerable ice. Corn, potatoes, and, in fact, everything green showed the effects of Jack Frost; and this is not all, the weather continues cloudy, wet and cool; on the 27th it was partly clear, but cool; on the 28th it rained all day; on the 29th it was mostly clear; temperature 70° . It was a pleasant day. To-day it rained hard from 5:30 a. m. to 1 p. m.

Mr. Heddon says, "Bees were never so weak and poor in stores, at this date, in my apiary." He will please remember the reply he gave my report, last fall. As I judge, from his present report, that his bees are in a very similar condition to that of mine a year ago; however, I sympathize with him, and it is most discouraging, indeed, to have all our bees in such a deplorable condition just at the time when we want them in the best condition.

My bees are as honeyless as they were a year ago to-day, but they are very strong in numbers. I shall feed some 30 pounds of sugar this evening. White clover is blooming sufficiently to support the bees, if they could get out. The prospects from white clover and basswood are equally as good, if not better, than at this time in 1882. Red clover, which, on account of being winter-killed, did not bloom in the forepart of last season, promises finely at present. Our bees have always worked on the first crop.

Bryant, Ill., May 30, 1883.

For the American Bee Journal.

Southern vs. Northern-Bred Queens.

A. B. WEED.

The subject of Southern vs. Northern-bred queens, which is just now receiving the attention, is an important one, or, at least, it will become so if there is shown to be foundation for controversy. It is commonly held that an animal succeeds best in the exercise of its powers, if kept in the locality where it was bred, because it is combated by no adverse climatic influence. This theory seems to be a very reasonable one, but it would be well to look at such facts as we may have which bear on the case.

In late numbers of the BEE JOURNAL, we have had reports of some Southern-bred queens which come in the North. These latter state-ments can hardly be said to prove anything, as the queens in question died before their first winter in their

new home, and so were not put to the test of cold weather. Their untimely failing must have been caused by something else than climatic influence. I have known queens bred in the North to do the same. On the other hand, I have had queens from Georgia which were unexceptionable in every respect.

The charge of inability to stand our severe winters, must apply with equal force to queens coming from Italy; while for other reasons I prefer home-bred queens, I believe that this complaint has never been made of imported ones.

If it is a fact that Southern-bred queens are inferior to those reared in the North, the result will be an injury to the business of Southern breeders, and a loss to Northern apiarists who wish to buy early queens.

I cannot speak of the BEE JOURNAL except in praise; the avidity with it seizes new subjects, and the ability with which it discussed them, makes it invaluable to those who would keep up with the times.

Detroit, Mich., May 21, 1883.

For the American Bee Journal.

Bee-Keeping in Canada.

JAMES SHANNON.

I have been interested in bee-culture for a number of years, but like many others, was content with the old box-hive and the old methods, and the result was a limited supply of honey for home consumption, and sometimes a little to spare. But about three years ago my attention was accidentally called to the scientific methods of bee-culture, and I at once became an enthusiast in the business, and went to work in good earnest to learn the principles of this pleasing occupation. While studying, I have been practicing, thus demonstrating the advantages or difficulties of different methods. After reading the standard works on bee-culture, I subscribed for the BEE JOURNAL, which has been a welcome visitor every week since.

I have wintered 7 colonies, 6 of which are in excellent condition, but one has dwindled badly. The weather here has been very cold and backward since the winter protection was removed. I think they should have remained in winter quarters until now. It seems to me that double-walled hives are almost a necessity to provide against this lingering cold in the spring, which so often prevails here; until this date, and even after, cold waves that greatly retard operations in the hive unless they have almost winter protection. I am experimenting in this matter. I have been greatly interested in the discussions about the coming bee. Surely, we should be as wise as the old patriarch who cared not whether his cattle were ring streaked, speckled or spotted; and, if we can bring out the good points by careful breeding, none need care about color or bands. I am trying to unite two valuable traits in my bees; one part are superior honey-

gatherers; the others, having a slight dash of Cyprian blood, have shown remarkable powers of building up. The only difficulty I have is the nearness of other bees.

I have sown 12 pounds of Bokhara clover, this spring, and intend trying other plants, believing pasturage to be a necessity. We have, however, good natural pasturage consisting of white clover, abundance of raspberries, and some basswood and golden-rod, and other plants upon which the bees work vigorously.

There is a growing interest in bee-culture here, and a good demand for colonies. I hope to report progress, from time to time, with the result of my experiments.

Wolverton, Ont., May 15, 1883.

For the American Bee Journal.

How I Get Bees into the Sections.

W. H. BALCH.

Years ago it used to be a hard job, sometimes, with some colonies of bees, even when all seemed propitious; while others, no stronger in numbers, were working with a will in sections, these would lay around for several days. Now, as soon as I get the hive filled with brood, I begin to open or ventilate the hives as fast as the bees will bear it and not chill the brood; I open the entrances a little each day, turn back the quilt, a little at a time, and soon. When the honey begins to come in, put on the sections, close all ventilation and the entrances as small as not to hinder them working. The hive is not cooled so much but that they have some bees to spare, and these will immediately go into the sections and begin work. Have one or more sections filled with natural comb, or foundation that was drawn out the previous year, and if you do not care for very much increase, watch the sections, and as soon as the first are filled, take them off and replace with empty ones; as the bees increase, give more ventilation. In this way I have prevented one-third of my bees, in a good honey season, from swarming; and many that did swarm, swarmed but once, and those that did not swarm, averaged a little over 300 pounds per colony, of honey in the comb.

Oran, N. Y., May 24, 1883.

For the American Bee Journal.

How to Make Out Reports.

W. H. STEWART.

There seems to be a general desire expressed by leading bee-keepers to collect and publish full and reliable statistics on bees and honey. Bee-keepers can never know their relative standing with other producing classes until they can obtain such statistics. To us it seems impossible to get a full and correct statement of our condition, products and prospects in any other way than to first get a full and correct report from each individual engaged in the business.

To do this, under the present condition of affairs, is no small matter. If each bee-keeper was taking a bee paper, and was able and ready to make out a full and correct report each year, then a committee could, by comparing those papers, approximate very nearly to the truth. But, unfortunately there are many bee-keepers who do not take a bee paper, or even take the trouble to borrow one to read; therefore, they cannot be expected to report; hence, it would have to be the business of some other person to pump a report from such men, and report for them.

It appears to be useless to depend upon assessors to gather these statistics, from the fact that in some States no account is taken of bees in the assessment. Again, if assessors and town boards should undertake to collect and report the full and correct condition of bee-culture in their respective towns, not one in one hundred of such officers know anything of bee-culture, and, consequently, could neither frame, ask or answer an important question on the subject.

There is yet another impediment in the way of getting even a correct report from those that do take and read bee literature. Many get a good crop of honey, and seem to be so overjoyed that they rush into print with the report, not stopping to ascertain at the year's end, whether or not bee-keeping has paid, all things considered. Others get discouraged when the year is, perhaps, half-passed, and report their discouragements, and then, may be, we hear no more from them. Others seem to be ambitious to excel in making outward show, and they double up as many bees as can be made to work together, and then take all their stores, and leave the bees to perish for the sake of reporting big yields from one colony, and, perhaps, a fair, aggregate report would show that the same man is losing money on his bees, all things considered. Others report good and honest as far as they go, but their reports not being full, are of but little value.

Allow me to give some examples of reports, and my reasons for thinking that such reports are in the end worthless. First, let me say that what I write on bee-culture, is only calculated for his northern latitude. Even in this region of long, cold winters, almost any one can manage bees safely and profitably through the summer seasons, but then comes the winters, during which the law of natural selection proves that the only road to successful bee-keeping is a well-arranged and closely-followed system deduced from reason, observation and experience.

To be useful, a report should embrace an experience for at least one whole year; not only so, but that year should begin and end at such dates, that we could learn from it what effect such and such management, through the spring, summer and fall had on the bees during the winter, and the manner they were wintered. I believe that all well-posted bee-keepers are agreed that if we begin in the spring with two colonies of bees

in equal condition, and from one take all the early honey, leaving only the late, unripe and inferior honey for winter stores, and give the other well-ripened and capped basswood or clover honey for winter food, the condition of the two colonies, in the spring, would be far different, whether outdoor or cellar wintering were tried.

But to the reports. In the BEE JOURNAL, page 59, Mr. H. Cripe reports as follows, under date Jan. 18, 1883: "Last spring I had 4 colonies of Italian bees (two strong and two very weak), they increased to 10 strong colonies, by natural swarming. The increase all came from 2 colonies, and I took 120 pounds of comb honey from them. I could have taken a quantity of extracted, but I had no extractor, so I thought I would keep it for spring feeding. After the honey season was over, I sold 2 colonies and bought 16 Italians and hybrids in Simplicity hives. * * *

I packed 10 in sawdust and 6 in chaff; the other 8 I put in the cellar. They are all alive (Jan. 18), but I cannot tell how they will come out. * * * We have had a solid winter since Nov. 23."

Now, in giving the above report, we wish to cast no slur, or find any fault with Mr. C., but we want all to see how reports could be made of lasting good. He says on Jan. 18, "all are alive, but I do not know how they will come out." If this report had been held until next June, he could have told us how they came out; but as it is, we will not be likely to ever know how they came out, and even if he tells us next spring, then we must find this report and compare it with the spring report (which course is not as yet being pursued, that I know of); and even if we compare the two reports, this one, at least, does not tell whether the 2 Italian colonies that gave 6 swarms were the two that he sold, or whether they are packed in sawdust, or in chaff, or in the cellar, or whether the cellar is under his dwelling, where the light is often carried, or whether the cellar is made in a sand-bank expressly for bee-wintering, and how ventilated, what kind of hives the first 4 colonies were in, what kind of hives he put the 6 swarms in, and whether the 6 were out or indoors. Will Mr. C. please report in this month and finish out what he has begun in the above partial report.

In another report by Mr. D. H. Hopkins, the same page, gives us to understand about how he managed his bees last summer, and that on Jan. 9, they were all very quiet in the cellar, with no dead bees on the floor, but that there were more than a bushel of dead bees on the floor the year before at the same date.

Now, if Mr. H. had told us how he managed his bees through the summer of 1881, then we might, perhaps, figure out the reason why bees, in the same hives and same cellar (we infer that they were the same) should winter so differently in two different winters. The management through the summer, and mortality the following winter, should have been given in a report by itself; and in the spring

the summer management and wintering that followed should be given, then the two reports could be compared, and the results deduced therefrom.

In the report of the New Jersey and Eastern Convention, on page 10 of the BEE JOURNAL, it will be noticed by Mr. King's remarks, that it was the next thing to impossible to get any reliable statistics on bee culture. Again, on page 772 of the BEE JOURNAL for 1882, in the remarks by the editor of *Bee-Keepers' Magazine*, he says that no reliance whatever could be placed on certain statistics, that he had found emanating from the Department at Washington; and in his closing remarks, *urges* the necessity of some plan which shall give accurately the facts, and so enable beginners to enter on the business understandingly. I am of the opinion that it would be a good plan for our editors to furnish their patrons with printed blank reports about May 1, requesting the bee-keepers to fill out by answering the following questions, or a similar list of questions could be arranged by the editors counseling together:

1. How many colonies on May 1, 1883?
2. What strain of bees?
3. In what condition?
4. In what kind of hives?
5. What is your locality?
6. How did you manage them through the month of May?
7. How through June?
8. How through July?
9. How through August?
10. How through September?
11. How through October?
12. How did you prepare them for winter in November, and what kind of stores, and how much surplus through the season?
13. How did they appear to do through each winter months?
14. If in cellar or clamps, on what date did you set them on summer stands in the spring of 1884?
15. How did they do from the time set out until May 1, 1884?

It seems to us that a tolerable good and reliable system of management could be deduced from a few years' report as above, but that one-half or one-third of the reports made at random, will result in very little good.

Orion, Wis.

For the American Bee Journal.

Essentials of a Standard Frame.

J. W. PORTER.

Replying to Dr. E. B. Southwick's letter, on page 263, as an advocate of the Langstroth frame, I would state the reasons why very many have adopted it, above all other frames:

1. It affords a very much larger surface on top, than any deep frame. The largest surface for comb honey on top is the main point, for many of us have no success in side-storing. It favors the internal economy of the hive, inasmuch as bees can reach their stores sooner by climbing a less distance, in the many thousands of loads daily

carried in.

2. The same superiority is claimed for extracting from the second story, over deep frames.

3. It disturbs the bees far less, to draw up from a hive the frames filled with honey or brood, nine inches deep, than twelve inches deep.

4. If queen-cells are formed, they are less liable to accidents.

5. In case of a slight deviation from the perpendicular in setting the hive, there is less danger of the combs being fastened to the sides.

So much has the first points been esteemed, that many efforts have been made to carry it still further and make the frames less deep, but it appears that the standard Langstroth frame is a sort of happy-medium between the two extremes of shallow and deep frames.

That it sufficiently meets the requirements for concentrating the cluster in winter and spring is clear, judging by the great success of the army of bee-keepers who use it. It will be admitted by most of the apiarists, I doubt not, that the square frame, "American" or "Gallup," has advantages for winter-clustering, but we claim not enough to compensate for the reduced superficies on the top of the brood.

Where are the returns from such that can equal the reports we have from those using the Langstroth frame? Mr. Doolittle comes the nearest to it, but I forget the dimensions of his frame. But he has been greatly surpassed, as the records show. While it is my practice to confine frequently to eight Langstroth frames, for comb honey, I wish the space for ten frames above, and have it by inserting dummies below, on each side. Even then I have to tier up, in "the season," the honey racks. Having used both kinds, I have given such reasons as my own experience suggests.

Charlottesville, Va., May 24, 1883.

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What and How.

ANSWERS BY

James Heddon, Dowagiac, Mich.

Letting Out Bees on Shares.

1. When bees are let out on shares, what are the conditions of the contract?

2. Who furnishes the new hives necessary for the increase?

3. Does the renter furnish all appliances for preparing the honey for market, or for only his share?

4. For what length of time are they generally let out for?

Mr. Heddon will confer a favor by answering the above through the "What and How" department of the BEE JOURNAL. As a rule, the bees wintered well in this county (Clinton).

HERBERT R. THOMAS.

Clarksville, O.

ANSWERS.—The "Bees on Shares" question, is one that I have studied considerably. In answering the above, I do so with a prejudice in favor of the laborer vs. the capitalist, a principle herein involved, though on ever so small a scale. Here are two facts:

1. Bees are to some considerable extent a risky property; their life and the amount of their stores being an unknown quantity. One should have a larger per cent. of income from such property, by three or four fold, than from a good, safe real estate mortgage.

2. On the other hand, the laborer should have an average income in advance of the "going wages." All this can be realized from the manipulation of bees, provided the bees are in proper hives, in a good location, and the work done by a faithful and learned man, and directed by experience and tact.

I will lay down the following terms as those which seem to me the nearest to being just, and the best adapted to both parties.

The one owning the bees shall furnish the place to establish the apiary. He shall furnish all the fixtures in ever respect. The laborer shall furnish himself nothing more.

The laziest tramp can turn and mend,
And be a man "for a' that."

The capitalist furnishes bees, apiary, tools, new hives for increase, comb foundation for surplus and brood departments, in full sheets; sections, shipping crates and everything, including his ripper experience (which, it is supposable, he possesses). He shall have the diction of the general plan of management, while the rentor does all the work, and is dictator of

the detail manipulation. The division shall be as follows: Each party shall have one-half of the surplus honey, and when it is sold, each one shall pay one-half of the cost of sections, shipping crates and surplus comb foundation that is sold with that season's crop. The capitalist shall have diction over the whole crop, merely dividing the money for the same, unless the laborer give security for the payment of his half of the sections, foundation and crates, when the honey may be divided, and each sell his own as he chooses. The bees should be managed for securing the greatest amount of surplus possible, and discouraged from swarming, all that such management tends to do, but when they do swarm, they are to be hived and managed as are the old colonies. The increase belongs to the apiary, always; and any system that gives a share of the increase to the laborer, will defeat itself, and prove in the end damaging to both parties. The old system of half the honey and half the increase, and the lessee or laborer furnish everything, is illy adopted to modern apiculture, and would give the capitalist "the lion's share." Of course the surplus from the increase is divided equally, the same as that from the old colonies. All the reasons for settling on the above terms as the nearest just and best, all around, are too many for the room I wish to occupy now.

Foundation in Frames and Sections.

1. How full should frames and sections be filled with foundation?

2. Should the foundation in frames be fastened only at the top? I have been in the habit of fastening it in frames and sections only at the top, and leaving $\frac{3}{8}$ to $\frac{1}{2}$ inch space at the sides and bottom.

3. Would it do to fill the sections so full of foundation that bees could not pass through?

4. How soon, after the brood has been chilled, can it be detected by an amateur, and how?

5. In taking frames of brood from strong colonies to build up weak ones, should the adhering bees be shaken off, or could they be safely put in, bees and all, by smoking or confusing the weak colonies?

Bees in this vicinity are doing well. A neighbor has had one swarm come off already, and reports other colonies liable to cast swarms soon. Prospects are good for an abundant honey flow from white clover. J. M. BURTCH.

Morrison, Ill., May 23, 1883.

ANSWERS.—1. In filling the brood frames I leave a space of $\frac{1}{8}$ to $\frac{1}{4}$ inch at the ends, and about $\frac{3}{8}$ at the bottom. In one-pound sections I leave

about $\frac{1}{8}$ at the sides, and $\frac{1}{4}$ to $\frac{3}{8}$ at the bottom.

2. I fasten my foundation to the top bar, and on to the wires woven vertically, eight in each Langstroth frame. I think you have had success with sections, but needed wires in the brood frames.

3. As far as the passage of the bees is concerned, I would not care for any run-way at the sides, only at the bottom, but I do not get as straight combs when the piece of foundation is fastened to the sides of the sections.

4. I have never had any chilled brood that I remember of. I think it will turn brownish a few hours after chilling.

5. I do not approve, as a general thing, of such exchanging at all; but where I do it, I shake off all the adhering bees and put in only brood about ready to emerge from the cells. Sometimes very young bees will kill a strange queen, and that, too, after much precaution.

SELECTIONS FROM OUR LETTER BOX

Bloom Promises Well and Fruit is Safe.

Here, in Belmont county, O., we have escaped the late terrible weather, with the exception of a few light frosts and 3 or 4 days of cool, cloudy, wet weather, which was pretty trying on the bees. The white clover and locust bloom promise well, and the fruit is still safe, as far as I have noticed.

R. M. DENHAM.

St. Clairsville, O., May 24, 1883.

Bee and Honey Show in Kentucky.

After a long silence as a correspondent to the BEE JOURNAL, I again pen a few lines. Our prospects for white clover honey was never better. Bees were storing honey and breeding comb up to May 19, when we had a big rain storm from the northwest, turning cold after the rain, with a severe blow for 48 hours. It was a cold blast, making us shiver with cold, and our bees could not get out, even for water. My apiary is in the best condition possible, and with one of Pelham's foundation machines, we are making beautiful foundation. We have the very finest of Italian bees, and the clover is very nice. Bees are beginning to build comb and store honey. Mr. Craycraft, of Salem, Ind., has my bees in charge, and we shall run them for both comb and extracted honey. Mr. Craycraft is well posted in scientific bee-culture, and is working my bees in a very satisfactory manner. Our State Society meets in Louisville next fall, and we want to make as fine a display of bees, honey and bee-fixtures as possible. We hope

honey producers and manufacturers of supplies (who will take an interest in the show) will write us what they desire to exhibit, so that we can secure space in the Industrial Exposition, which opens Aug. 1 and closes Nov. 1. As secretary of Kentucky State Bee-Keepers' Association, I will do all I can to make the exhibit a success. Every bee-keeper in Kentucky ought to have something on exhibition, and bee-keepers and manufacturers in other States are invited to help us.

N. P. ALLEN.

Smith's Grove, Ky., May 23, 1883.

Cyprians, Motherwort, etc.

I have 53 colonies of bees; one being a Cyprian, which gives the most honey, and are as gentle as any other bee. I have not been stung by them yet, and I have had them nearly a year. A friend of mine says, "Give me Cyprians after this;" some say that Cyprians are hard to manage, but I cannot see it. Motherwort grows very easily. I have some of it, and will plant it all the time, as it blooms always; as fast as the old stock dies down, younger ones take its place, and I think it worth planting. It can be planted any place, or along the fences.

G. E. SONNEMANN.

New Iberia, La., May 25, 1883.

Fruit Trees Blooming.

My bees have wintered very well. I only had 49 colonies in the fall, when put in the cellar; I lost two, by being queenless. We have had a cold spring, and I have had to feed some. Apple blossoms are just out; the first ones opened yesterday, and if it keeps warm, they will strengthen up pretty fast.

D. S. McCALLUM.

Big Creek, N. Y., May 26, 1883.

Bees in Fine Condition.

Our bees are in fine condition. The white clover is very thrifty, and with good weather will be apt to yield well.

F. A. SNELL.

Milledgeville, Ill., May 27, 1883.

Prospects Favorable in California.

Our prospects are very favorable. We have fine late rains, and the bees are booming.

R. STRATHEARN.

Scenega, Cal., May 20, 1883.

Gone to the South.

As frost, ice and cold winds had been the order of the day, up to May 15, I made up my mind to come South at once, and on the 17th inst., I chartered a car to Tullahoma, Tenn., and loaded on 67 colonies of my bees with household goods and started them South. On the 22d inst., with my family, I left Indiana; when we left, it was snowing and cold. We arrived here on the evening of the 23d, and found it pleasant and warm weather. My bees came through in splendid condition.

I. R. GOOD.

Tullahoma, Tenn., May 26, 1883.

Prospects Flattering.

The bees are booming and prospects flattering.

W. H. STOUT.

Pine Grove, Pa., May 28, 1883.

Destroying the Queen-Cells.

No doubt many have read in the books that when bees are making preparations to swarm, because of unfavorable weather or other causes, the cells will be at once destroyed. This has not always been the case with my bees. I found by experience, that sometimes (though not always) the young queens are allowed to hatch; and when such is the case, the first queen that emerges will destroy the remaining cells, and in a majority of cases, kill the old queen too. As this generally happens when our queens are needed the most, I think it is poor policy to let any capped cells remain in a colony when the conditions for swarming are not favorable. Although when the bees wish to supersede their queen, the young queen will seldom kill her mother; but in swarming, this is not the case; at least such has been my experience.

H. J. SCHROCK.

Goshen, Ind., May 29, 1883.

Correction.

In my letter on page 261, the printer, in mistaking the word *rather* in my manuscript for "either," and leaving out a word altogether in another sentence, spoils both. Allow me, therefore, to give the two sentences here as they were written in my manuscript, italicising the two words left out: "But it would be *rather* disingenuous to say that one colony of bees did all this, without giving any explanations."

Now, please bear in mind, I do not wish to impeach the honesty or sincerity of a single correspondent."

ALLEN PRINGLE.

Selby, Ont., May 25, 1883.

Swarmed in a Hurry.

I wintered 20 colonies in Langstroth chaff hives. They wintered well, and came out very strong. Henry Alley recommends raising up the hives, a foot or more from the ground, so that they will not get snowed under. My experience is, that bees will do better if they are under a snow bank, then they would if they were elevated and exposed to the wind and cold. My bees were covered with snow, or nearly so, from the early part of the winter until early in March, then I shoveled out their entrances, and they had a splendid flight, and showed little signs of dysentery. I gave them a thorough examination about April 10, and found from 2 to 4 frames of honey that had not been touched in each hive (I gave them 7 Langstroth frames to start on). On the 26th of this month I lost a large swarm of bees, and as it was a little out of their common way of doing business, I will describe it. The queen was a hybrid, and very prolific. I had taken 4 frames of capped brood from it, to build up nuclei, but the hive was full of bees. I examined the hive the day before the swarm issued, and found several queen-cells started, 3 or 4 containing eggs, but no hatched eggs or larvæ; so I felt sure the bees would not swarm in 7 or 8 days, so I left home at 8 a. m.; the swarm came out at

8:20; I returned at 9:15 a. m., and met the swarm a few rods from home, on their flight to the woods. There was no one to hive them, or I would not have lost them. I examined the hive, after they left, and found no eggs hatched yet, and I do not know how to account for their hurry. Can any reader of the BEE JOURNAL explain it?

J. A. MURPHEY.

Sterling Station, N. Y., May 26, 1883.

Dysentery.

I have a colony of bees in my apiary that seem to me to suffer from dysentery, or rather from the fact of being unable to discharge their feces. The hive is surrounded daily, on the ground, with a quivering mass of animated bees, but unable to walk. In the morning they are all dead, and the process is repeated. Their bodies are distended and filled with a large amount of yellow matter. The colony is apparently in fair condition. What is the cause and the remedy?

F. C. GASTINGER.

Ada, O., May 31, 1883.

[It is evidently a case of dysentery. It might have been caused by poor honey, or something of that nature. As the summer is now upon us, fine weather and new honey will remedy it all. If they are not gathering honey, give them some good white clover or basswood honey; or if you have none of that, some sugar syrup, made as indicated on page 283.—Ed.]

Report for 3 Years.

I have kept bees for about 16 years; all of the time, except the last 3 years, being in Ontario. During all that time I never exceeded more than 25 colonies and 200 pounds of comb honey, once or twice, and thought myself lucky at that. I moved here (Michigan) in March, 1880, bringing with me 2 colonies with dollar queens. I moved them 28 miles from the railroad here on a lumber wagon; still they increased by natural swarming to 10 good colonies, and gave some surplus comb honey. I wintered them on the summer stands, and all came out strong in the spring of 1881; and during that summer they increased to 25, and produced 700 pounds of comb honey. Again they were wintered on the summer stands, with the loss of 2, which I think were queenless, which left me 23 in the spring of 1882. During that summer they increased to 63, besides 7 that left for the woods, and gave me 2,200 pounds of surplus comb honey. I again wintered them on the summer stands, and now May 22, they are reduced to 50 colonies; the past winter, and especially this spring, has been very hard on bees; several of my neighbors have lost heavily. I use the Fisher deep-framed hive, and fill the walls with sawdust. Bees do well here; there seems to be a constant flow of honey from early spring till frost.

WM. SHIER.

Marlette, Mich., May 22, 1883.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for \$5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

Our Premiums for Clubs.

Any one sending us a club of two subscribers for 1 year, for the Weekly, with \$4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with \$6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with \$8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with \$10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

The Central Kansas Bee-Keepers' Association will meet at Manhattan, Kansas, on June 30, 1883.

THOS. BASSLER, Sec.

On page 261, 33d line from top of first column, instead of "following," read "preceding seasons."

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to new Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, \$4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages).....\$1 00
" 100 colonies (220 pages)..... 1 50
" 200 colonies (420 pages)..... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Special Notice.—We will, hereafter, supply the Weekly BEE JOURNAL for one year, and the seventh edition of Prof. Cook's Manual of the Apiary, bound in fine cloth, for \$2.75, or the Monthly Bee Journal, and the Manual in cloth for \$1.75. As this offer will soon be withdrawn, those who desire it should send for the book at once.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Sample Copies of the AMERICAN BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL.
Monday, 10 a. m., June 4, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY.—The nominal price of extracted is 7c. for dark and 8c. for light—here. The supply is abundant and sales are slow.

BEESWAX.—None in the market.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY.—The market for extracted honey is lively, and the demand exceeds the arrivals. Our stock is small and we are in danger of having sold out every day. We pay 7½c. for good honey on arrival, the latter price for choice clover. There is a small demand for comb honey, and prices nominal.

BEESWAX.—Arrivals of beeswax are plentiful. We pay 35c. for a good article on arrival.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY.—I sold, of the comb honey crop of 1882, up to the first of January, 1883, nearly 120,000 lbs; since January 1st to April 1st, sales have been slow, and yet 70,000 pounds have been disposed of.

There is, perhaps, a few tons of dark and buckwheat comb honey on this market that will not be consumed before the new crop comes into market. There has been 3 pounds of comb honey crop of 1882 offered in this market, to one of the crop of 1881.

Extracted honey has aggregated in sales 140,000 pounds. There is, perhaps, a good deal to carry over, yet on the market. Prices since the first of December, 1882, have gradually declined until the present date. At this late hour, holders are anxious to sell; hence prices vary very much.

BEESWAX—35¢@36¢.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY.—Stocks and the demand are both light. More or less difficulty would be experienced in filling a large order for a straight lot.

White comb, 14¢@17¢; dark to 20¢@11¢@13¢; extracted, choice to extra white, 8¢@9¢@10¢; dark and candied, 5¢@7¢@8¢.

BEESWAX.—Wholesale, 27¢@28¢.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY.—Dull; light jobbing sales only. Comb at 10¢@14¢. Strained and extracted at 7¢@7½¢.

BEESWAX.—Sold lightly at 32¢@34¢.

W. T. ANDERSON & CO., 117 N. Main Street.

CLEVELAND.

HONEY.—Stocks of honey are running low with us. 1-lb. sections are all sold and there is a very light inquiry for such; would probably sell at 18¢@20¢. 2-lb. sections are not in demand, and no sales to quote, asking 17¢@18¢. Extracted no sale at 9¢@10¢.

BEESWAX.—Not offering.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY.—Our market is fairly active. We quote: ¼ lb. sections at 30¢; 1 lb. sections, 22¢@25¢; 2 lb. sections, 20¢@22¢. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX.—Our supply is gone; we have none to quote.

CROCKER & BLAKE, 57 Chatham Street.

Do not send coins in a letter. It is dangerous and increases the postage unnecessarily. Always send postage stamps, for fractions of a dollar, and, if you can get them—one-cent stamps; if not, any denomination of postage stamps will do.

Do not let your numbers of the BEE JOURNAL for 1882 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Bingham Smoker Corner.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent post-paid for \$1.75. Address,

BINGHAM & HETHERINGTON,
Abronia Mich.

All Excelling. — Messrs. Bingham & Hetherington, Dear Sirs:—I am now selling your Smokers almost exclusively. You are excelling yourselves in smokers all the time.

Respectfully, J. G. TAYLOR.
Austin, Texas, May 10, 1883.

Cyprians Conquered.

All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." Bingham's "Conqueror Smoker" did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of Bingham.

G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

During the following three months, Bingham Smokers will be sent post-paid, per mail, on receipt of the following prices:

The "Doctor" (wide shield)—3¼ in. fire tube, \$2.00
The Conqueror (wide shield)—3 in. fire tube, 1.75
Large (wide shield)—2½ in. fire tube, 1.50
Extra (wide shield)—2 in. fire tube, 1.25
Plain (nar. shield)—2 in. fire tube, 1.00
Little Wonder (nar. shield)—1¾ in. fire tube, .85
Bingham & Hetherington Uncapping Knife.. 1.15

With thanks for letters of encouragement, and the absence of complaining ones, we tender to our thirty-five thousand patrons our best wishes.

Very Respectfully Yours,
BINGHAM & HETHERINGTON.
Abronia, Mich., June 1, 1883.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Friends, if you are in any way interested in

BEEES OR HONEY

We will with pleasure send you a sample copy of the *Monthly Gleanings in Bee-Culture*, with a descriptive price-list of the latest improvements in Hives, Honey Extractors, Comb Foundation, Section Honey Boxes, all books and journals, and everything pertaining to Bee Culture. *Nothing Patented*. Simply send your address written plainly, to

Ctf A. I. ROOT, Medina, O.

HEADQUARTERS IN THE SOUTH

For the manufacture of
BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. Send for my Illustrated Catalogue.

5Ctf PAUL L. VIALLO, Bayou Goula, La.

The Bee-Keepers' Guide,

OR, MANUAL OF THE APIARY.

9,000 SOLD IN SIX YEARS.
10th Thousand Just Out.

More than 50 pages, and more than 50 fine illustrations added. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by Mail, \$1.25.

Liberal discount to dealers and to clubs.
A. J. COOK,
17Ctf Author and Publisher, Lansing, Mich.

HOLY LAND QUEENS.

Untested, ready about June 10. Single Queen, in this month, \$1.25; six or more, \$1.00 each; no tested Queens, this month.

I. R. GOOD, TULLAHOMA, Coffee Co., TENN.
23A4w

1883. 1883.

YOU GET VALUE RECEIVED!

QUEENS, BEES AND SUPPLIES

If you want **EARLY QUEENS** from the best improved genuine stock for business; or if you want Imported Italian Queens or bees, in full colonies or nuclei, with tested or untested queens; if you want Dunham or Vandervort comb foundation, made from pure beeswax; or if you want hives or apiarian supplies of any kind, send for my new catalogue. It tells you about introducing queens, new "Races of Bees," etc. Cash paid for clean beeswax. Address,

J. P. H. BROWN.
Augusta, Georgia.

1883. JOSEPH D. ENAS, 1883.
(Sunny Side Apiary.)

Pure Italian Queens, Bees, Colonies, Nuclei, EXTRACTORS, COMB FOUNDATION, &c
19D6m Address, Sunny Side Apiary, NAPA, CAL.

W. Z. HUTCHINSON,

Rogersville, Genesee County, Mich.

is now receiving Italian Queens from the South (for particulars see advertisement in the BEE JOURNAL of April 18), and can send them by return mail at the following prices: Before June 1st, untested queens will be \$1.50 each; during June, single queen \$1.25, or six for \$6.00; after July 1st, single queen \$1.00, six for \$5.50, twelve for \$10.00. Tested queens (reared last season in the home apiary), before June 1st, \$3.00 each; during June, \$2.50 each; after July 1st, \$2.00 each. Safe arrival guaranteed. Make money orders payable at Flint, Mich. 17eow tf

SECTIONS.



We have just put in several new machines and also a larger engine in our factory, consequently we are in better shape to fill orders than ever for Sections, Shipping Crates, etc., etc. We make a specialty of our

"BOSS" ONE-PIECE SECTIONS,

Patented June 28th, 1881.

We can make the "Boss" One-Piece Sections any size or width desired. Send for Price List.

We make the Half-Pound Section any size desired.

JAS. FORNCROOK & CO.

1BCtf Watertown Jeff. Co. Wis., Jan. 1, 1883.

PLYMOUTH ROCKS

Iroquois Strain. Four Yards.

Correspondence cheerfully answered. Prices reasonable. W. H. BUSSEY, 131 Lake Street, Chicago.

2BCty

E. T. LEWIS & CO., Toledo, Ohio,
Manufacturers of the U. S. STANDARD Honey Extractor (new improvements), and all other Apiarian Supplies. Send for circular. 17A 5Btf

1883. 1883.
ITALIAN QUEENS.



I am now booking orders for queens. I cull my queens as they hatch, is the reason my customers were so well pleased last year.

Send me your address on a postal, and get circular.
Six Queens for \$5.00.

J. T. WILSON,

Mortonsville, Woodford Co., Ky.
6BCtf

PURE ITALIAN BEES AND QUEENS,

Tested and untested Queens, nuclei in Langstroth size frames, full colonies, queens by the half dozen, bees by the pound. Send for prices and particulars.

44Atf

A. B. MILLER & SON,
Wakarusa, Elkhart Co., Ind.

QUEENS!

During June and July, I shall be prepared to furnish the CHOICEST OF QUEENS, both tested and untested, from two different strains. 1. From my new strain, viz: a cross between the Brown, German, and dark leather-colored Italian. 2. Pure Italians reared from imported mothers. With my hives of all worker combs, using drone comb where I desire it only, isolated from other apiaries, I have the best of opportunities to control the mating of my Queens. I rear Queens under the swarming impulse only, and upon the true plan of getting the best and most vigorous stock. All orders filled in turn, and it is useless to hurry us.

PRICES:

Tested Queens (all selected) each,.....\$ 3.00
Untested before July 1, each,..... 1.50
Untested after July 1, each,..... 1.00
These are bottom prices in any quantity. Send for descriptive Catalogue to

JAMES HEDDON, Dowagiac, Mich.

I cannot supply any more COMB FOUNDATION during 1883; my stock is exhausted.

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,

Langstroth Bee Hives, Honey Sections, etc.

Apply to C. P. MUTH,

976 and 978 Central Ave., CINCINNATI, O.

Send 10c. for Practical Hints to Bee-Keepers.

65 ENGRAVINGS.

THE HORSE,

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 35 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,

925 West Madison Street, CHICAGO, ILL.

\$72 A week made at home by the industrious. Best business now before the public. Capital not needed. We will start you. Men, women, boys and girls wanted everywhere to work for us. Now is the time.

You can work in spare time, or give your whole time to the business. No other business will pay you nearly as well. No one can fail to make enormous pay, by engaging at once. Costly outfit and terms free. Money made fast, easily and honorably. Address TRUE & CO., Augusta, Maine. 8Aly

FLAT-BOTTOM

COMB FOUNDATION.



high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,

Sole Manufacturers.

Sprout Brook, Mont. Co., N. Y.

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,

1ABtf

HOOPESTON, ILL.

CHEAP! CHEAP!

LANGSTROTH HIVES!

SIMPLICITY HIVES!

All kinds of hives and surplus comb foundation, etc., etc. Having superior advantages for the manufacturing of hives and of procuring lumber low, I can furnish very low rates.

Send for descriptive circular.

A. D. BENHAM,

10Atf

Olivet, Mich.